



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,467	12/13/2006	Roland Edelmann	289261US0PCT	7208
22850 7590 04/06/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER YAGER, JAMES C	
			ART UNIT	PAPER NUMBER
			1794	
			NOTIFICATION DATE	DELIVERY MODE
			04/06/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/576,467	Applicant(s) EDELMANN ET AL.	
	Examiner JAMES YAGER	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 11-14 and 21-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060718; 20070221 & 20070711</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in the reply filed on 26 January 2009 is acknowledged. The traversal is on the ground(s) that restriction is improper. This is not found persuasive because:

Applicant argues that the examiner has not met his burden of explaining why each group lacks unity with each other group. This argument is not persuasive because the examiner clearly set forth why each group lacks unity with each other group in paragraph 2 of the communication mailed 19 September 2008.

Applicant argues that the restriction is improper because unity of invention has to be considered in the first place only in relation to the independent claim. However, given that the definition of dependent claim (See MPEP 1850 II; Appendix AI Annex B) is one that has all the features of another claim and is in the same "category", it is clear that claims 11 and 21 are not dependent claims of claim 1 by this definition, but rather independent claims since they are drawn to different categories than claim 1.

Applicant argues that each group has unity of invention, but does not provide any evidence to support this position, nor does applicant specifically address the reasons for lack of unity set forth by the examiner in paragraph 2 of the communication mailed 19 September 2008.

Applicant further argues that a restriction should not be required when the International Examination Report did not require restriction. This argument is not persuasive because the presence or absence of a restriction requirement in the International Examination Report has no bearing on whether or not a restriction is required in the national stage.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 11-14 and 21-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 26 January 2009.

Claim Objections

3. Claim 7 is objected to because of the following informalities: the terms "hvdroxides" and "hvdroxide" in lines 3 and 4 appear to be typos. Should they be "hydroxides" and "hydroxide"? Appropriate correction is required.

4. Claim 15 and 16 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should not refer to two sets of claims to different features (composition of claim 1 and method of claim 11). See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 2 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "where appropriate" renders the claim indefinite because it is not clear what is meant by this phrase, or when it would be appropriate.

Regarding claims 2 and 6, the Markush groups are improper. Applicant should either delete "series" and insert "group consisting of". In claim 2, "and" should be inserted before "3-acryloxypropylmethyldiethoxysilane".

Regarding claim 7, In light of the parentheses it is not clear if the silica is actually required to be precipitated or fumed. Applicant is advised to remove the parentheses.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1794

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-5, 8-10 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanavati (WO 01/66655) in view of Wyman (US 5,077,135).

Regarding claims 1-5 and 8-10, Nanavati discloses a coating composition having barrier properties (i.e. barrier layer) (P1/L5-10), comprising N-(2-aminoethyl)-3-aminopropyltrimethoxy silane (i.e. (ii) at least one aminoalkylalkoxysilane; N-(2-aminoethyl)-3-aminopropyltrimethoxy silane) (P4/L7-10), pyrogallol (i.e. (iii) at least one polyol; aromatic polyol; pyrogallol) (P6/L6-10), reacted in a solvent such as methanol in an amount of 1% to about 99% of the composition (i.e. (vii) reaction products produced

Art Unit: 1794

under hydrolysis conditions (viii) and organic solvent; aliphatic alcohol) (P6/L10-20), further comprising a photoinitiator (i.e. which comprises photoinitiator) (P8/L25-30).

Nanavati does not disclose (i) at least one organoalkoxysilane whose organofunctionality displays at least one unsaturated hydrocarbon group; or that the molar ratio of (i) : (ii) : (iii) is (i) = 1 and (ii) = from 0.5 to 1.5, and (iii) = from 0.3 to 1.1.

Wyman discloses a coating for improving gas impermeability (i.e. a barrier layer) (C2/L1-5), comprising vinyl triethoxy silane (i.e. (i) at least one organoalkoxysilane whose organofunctionality displays at least one unsaturated hydrocarbon group; vinyltriethoxysilane) (C6/L60-65). Wyman further discloses that the coating is smooth and uniform (C6/L65-68), therefore having improved barrier properties (C3/L42-50).

Nanavati and Wyman are analogous art because they both teach about barrier layers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the vinyl triethoxy silane of Wyman in the coating composition of Nanavati to provide a coating composition wherein the coating is smooth and uniform, therefore having improved barrier properties.

Given that the solvent is present in an amount of 1% to 99%, it is the examiner's position that the solids content of the composition would be from 1% to 99% which clearly overlaps the instantly claimed range of 10 to 60% by weight solids.

Neither Nanavati nor Wyman disclose that the molar ratio of (i) : (ii) : (iii) is (i) = 1 and (ii) = from 0.5 to 1.5, and (iii) = from 0.3 to 1.1. However, when faced with a mixture, one of ordinary skill in the art would be motivated by common sense to select a 1:1 ratio, a ratio that falls within the presently claimed amount, absent evidence of

Art Unit: 1794

unexpected or surprising results. Case law holds that "[h]aving established that this knowledge was in the art, the examiner could then properly rely... on a conclusion of obviousness, 'from common knowledge and common sense of the person of ordinary skill in the art within any specific hint or suggestion in a particular reference.'" *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969).

Regarding claims 15-20, the recitation in the claims that the composition is "for producing a radiation-cured barrier layer for gasses on a packaging material composed of plastic, paper, cardboard or paperboard; for producing a radiation-cured barrier layer for gases, wherein at least one further coating capable of curing by a thermal, free-radical, or radiation method is applied as an outer layer to the barrier layer", etc. are merely intended uses. Applicants attention is drawn to MPEP 2111.02 which states that intended use statements must be evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the intended use recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art and further that the prior art structure is capable of performing the intended use. Given that modified Nanavati discloses a composition as presently claimed, it is clear that the composition of Nanavati would be capable of performing the intended use, i.e. producing a radiation-cured barrier layer for gasses on a packaging material composed of plastic, paper, cardboard or paperboard; or producing a radiation-cured

Art Unit: 1794

barrier layer for gases, wherein at least one further coating capable of curing by a thermal, free-radical, or radiation method is applied as an outer layer to the barrier layer, presently claimed as required in the above cited portion of the MPEP, and thus, one of ordinary skill in the art would have arrived at the claimed invention.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nanavati (WO 01/66655) in view of Wyman (US 5,077,135), as applied to claim 1 above, in further view of Ichikawa et al. (US 4,735,832) or Komada (US 2001/0038894).

Regarding claim 6, modified Nanavati discloses all of the claim limitations as set forth above. Modified Nanavati does not disclose that the composition comprises a component (iv) selected from the series tetraethoxysilane, oligomeric tetraalkoxysilane, propyltrimethoxysilane, propyltriethoxysilane, octyltrimethoxysilane, octyltriethoxysilane, alcoholic and or aqueous compositions of oligomeric cocondensates composed of aminoalkylalkoxysilanes and of fluoroalkylalkoxysilanes and also oligomeric condensates or cocondensates composed of alkylalkoxysilanes, and also oligomeric condensates or cocondensates composed of alkylalkoxysilanes and/or or vinylalkoxysilanes.

Ichikawa discloses a coating having a gas barrier characteristic comprising low permeability to oxygen and carbon dioxide (i.e. barrier layer) (C3/L55-60), comprising a composition comprising organoalkoxy silanes such as tetraethoxy silane (i.e. (iv) selected from the series tetraethoxysilane) (C9/L10-20).

Nanavati, Wyman and Ichikawa are analogous art because they both teach about barrier layers. Therefore, it would have been obvious to one of ordinary skill in

Art Unit: 1794

the art at the time the invention was made to incorporate the composition comprising tetraethoxy silane of Ichikawa into the composition of modified Nanavati to provide a coating with further improved gas barrier characteristics such as low permeability to oxygen and carbon dioxide.

Komada discloses a gas barrier film (i.e. a barrier layer) ([0001]), comprising tetraethoxysilane ([0140]-[0143]). Komada discloses that the film has improved barrier properties ([0143]).

Nanavati, Wyman and Komada are analogous art because they both teach about barrier layers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the tetraethoxysilane of Komada into the composition of modified Nanavati to provide a coating with further improved gas barrier characteristics.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nanavati (WO 01/66655) in view of Wyman (US 5,077,135), as applied to claim 1 above, in further view of Huffer et al. (US 2002/0146525).

Regarding claim 7, modified Nanavati discloses all of the claim limitations as set forth above. Modified Nanavati does not disclose that the composition comprises a component (v) selected from the group consisting of silica (precipitated or fumed), silicates, aluminum oxides, aluminum oxide hydroxides and aluminum hydroxide.

Huffer discloses a coating as a barrier to oxygen and moisture (i.e. a barrier layer), comprising aluminum oxide ([0034]).

Nanavati, Wyman and Huffer are analogous art because they all teach about barrier layers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the aluminum oxide of Huffer into the composition of modified Nanavati to provide a composition with enhanced barrier properties to oxygen and moisture.

12. Claims 1-5, 8-10 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wyman (US 5,077,135) in view of Nanavati (WO 01/66655).

Regarding claims 1-5, 8-9 and 15-20, Wyman discloses a coating for improving gas impermeability (i.e. a barrier layer) (C2/L1-5), comprising vinyl triethoxy silane (i.e. (i) at least one organoalkoxysilane whose organofunctionality displays at least one unsaturated hydrocarbon group; vinyltriethoxysilane), gamma-aminopropyl tri-ethoxy silane (i.e. (ii) at least one aminoalkylalkoxysilane; 3-aminopropyltrieth-oxysilane) and methanol, subjected to hydrolysis (i.e. (vii) reaction products produced under hydrolysis conditions (viii) and organic solvent; aliphatic alcohol) (C6/L58-65; C5/L5-12). Wyman does not disclose (iii) at least one polyol aromatic polyol; pyrogallol, nor a photoinitiator.

Nanavati discloses a coating composition having barrier properties (i.e. barrier layer) (P1/L5-10), comprising N-(2-aminoethyl)-3-aminopropyltrimethoxy silane (i.e. (ii) at least one aminoalkylalkoxysilane) (P4/L7-10), and pyrogallol (i.e. (iii) at least one polyol; aromatic polyol; pyrogallol) (P6/L6-10), further comprising a photoinitiator (i.e. which comprises photoinitiator) (P8/L25-30). Nanavati further discloses that the pyrogallol reacts with the aminofunctional silane forming a complex which provides unique physical properties which are good for barrier coatings (P5/L25-30).

Art Unit: 1794

Wyman and Nanavati are analogous art because they both teach about barrier coatings. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the pyrogallol of Nanavati into the composition of Wyman to provide a composition having unique physical properties which are good for barrier coatings, and to incorporate the photoinitiator of Nanavati into the composition of Wyman to provide a composition that can be cured more rapidly.

Neither Wyman nor Nanavati disclose that the molar ratio of (i) : (ii) : (iii) is (i) = 1 and (ii) = from 0.5 to 1.5, and (iii) = from 0.3 to 1.1. However, when faced with a mixture, one of ordinary skill in the art would be motivated by common sense to select a 1:1 ratio, a ratio that falls within the presently claimed amount, absent evidence of unexpected or surprising results. Case law holds that "[h]aving established that this knowledge was in the art, the examiner could then properly rely... on a conclusion of obviousness, 'from common knowledge and common sense of the person of ordinary skill in the art within any specific hint or suggestion in a particular reference.'" *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969).

Regarding claim 10, Wyman discloses that the composition comprises 10ml of a mixture of silanes dissolved in 90 ml of methanol and 1ml of water . Therefore, the quantity of silanes (i.e. solids content) is calculated to be 9.9% (10ml silanes/101ml total). It is apparent, however, that the instantly claimed amount of silanes and that taught by modified Wyman are so close to each other that the fact pattern is similar to the one in In re Woodruff , 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985)

Art Unit: 1794

where despite a "slight" difference in the ranges the court held that such a difference did not "render the claims patentable" or, alternatively, that "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties".

In light of the case law cited above and given that there is only a "slight" difference between the amount of silanes disclosed by modified Wyman and the amount disclosed in the present claims and further given the fact that no criticality is disclosed in the present invention with respect to the amount of silanes, it therefore would have been obvious to one of ordinary skill in the art that the amount of silanes disclosed in the present claims is but an obvious variant of the amounts disclosed in modified Wyman, and thereby one of ordinary skill in the art would have arrived at the claimed invention.

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wyman (US 5,077,135) in view of Nanavati (WO 01/66655), as applied to claim 1 above, in further view of Ichikawa et al. (US 4,735,832) or Komada (US 2001/0038894).

Regarding claim 6, modified Wyman discloses all of the claim limitations as set forth above. Modified Wyman does not disclose that the composition comprises a component (iv) selected from the series tetraethoxysilane, oligomeric tetraalkoxysilane, propyltrimethoxysilane, propyltriethoxysilane, octyltrimethoxysilane, octyltriethoxysilane, alcoholic and or aqueous compositions of oligomeric cocondensates composed of aminoalkylalkoxysilanes and of fluoroalkylalkoxysilanes and also oligomeric condensates or cocondensates composed of alkylalkoxysilanes, and also oligomeric

Art Unit: 1794

condensates or cocondensates composed of alkylalkoxysilanes and/or or vinylalkoxysilanes.

Ichikawa discloses a coating having a gas barrier characteristic comprising low permeability to oxygen and carbon dioxide (i.e. barrier layer) (C3/L55-60), comprising a composition comprising organoalkoxy silanes such as tetraethoxy silane (i.e. (iv) selected from the series tetraethoxysilane) (C9/L10-20).

Wyman, Nanavati and Ichikawa are analogous art because they all teach about barrier layers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the composition comprising tetraethoxy silane of Ichikawa into the composition of modified Wyman to provide a coating with further improved gas barrier characteristics such as low permeability to oxygen and carbon dioxide.

Komada discloses a gas barrier film (i.e. a barrier layer) ([0001]), comprising tetraethoxysilane ([0140]-[0143]). Komada discloses that the film has improved barrier properties ([0143]).

Wyman, Nanavati and Komada are analogous art because they both teach about barrier layers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the tetraethoxysilane of Komada into the composition of modified Wyman to provide a coating with further improved gas barrier characteristics.

Regarding claims 15-20, the recitation in the claims that the composition is “for producing a radiation-cured barrier layer for gasses on a packaging material composed

Art Unit: 1794

of plastic, paper, cardboard or paperboard; for producing a radiation-cured barrier layer for gases, wherein at least one further coating capable of curing by a thermal, free-radical, or radiation method is applied as an outer layer to the barrier layer” are merely intended uses. Applicants attention is drawn to MPEP 2111.02 which states that intended use statements must be evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the intended use recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art and further that the prior art structure is capable of performing the intended use. Given that modified Wyman discloses a composition as presently claimed, it is clear that the composition of Wyman would be capable of performing the intended use, i.e. producing a radiation-cured barrier layer for gasses on a packaging material composed of plastic, paper, cardboard or paperboard; or producing a radiation-cured barrier layer for gases, wherein at least one further coating capable of curing by a thermal, free-radical, or radiation method is applied as an outer layer to the barrier layer, presently claimed as required in the above cited portion of the MPEP, and thus, one of ordinary skill in the art would have arrived at the claimed invention.

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wyman (US 5,077,135) in view of Nanavati (WO 01/66655), As applied to claim 1 above, in further view of Huffer et al. (US 2002/0146525).

Art Unit: 1794

Regarding claim 7, modified Wyman discloses all of the claim limitations as set forth above. Modified Wyman does not disclose that the composition comprises a component (v) selected from the group consisting of silica (precipitated or fumed), silicates, aluminum oxides, aluminum oxide hydroxides and aluminum hydroxide.

Huffer discloses a coating as a barrier to oxygen and moisture (i.e. a barrier layer), comprising aluminum oxide ([0034]).

Wyman, Nanavati and Huffer are analogous art because they all teach about barrier layers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the aluminum oxide of Huffer into the composition of modified Wyman to provide a composition with enhanced barrier properties to oxygen and moisture.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES YAGER whose telephone number is (571)270-3880. The examiner can normally be reached on Mon - Thurs, 7:30am-5pm, EST, Alt. Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY 3/23/09

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794